1. Simplify the expression below and choose the interval the simplification is contained within.

$$19 - 18^2 + 6 \div 9 * 11 \div 3$$

A. $[-306.98, -303.98]$

B. $[343.44, 350.44]$

C. $[-303.56, -299.56]$

D. $[338.02, 345.02]$

E. None of the above

---

2. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{0}{11\pi} + \sqrt{9}i$$

A. Rational

B. Nonreal Complex

C. Irrational

D. Not a Complex Number

E. Pure Imaginary

---

3. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{-54 + 88i}{2 + 4i}$$

A. $a \in [243, 246]$ and $b \in [19, 20]$

B. $a \in [-24, -22.5]$ and $b \in [-2.5, -1.5]$

C. $a \in [-28, -26.5]$ and $b \in [21, 23]$

D. $a \in [10.5, 12.5]$ and $b \in [390.5, 393]$

E. $a \in [10.5, 12.5]$ and $b \in [19, 20]$

---

4. Choose the **smallest** set of Real numbers that the number below belongs to.

$$-\sqrt{\frac{4225}{25}}$$

A. Whole

B. Not a Real number

C. Rational

D. Integer

E. Irrational

---

5. Simplify the expression below and choose the interval the simplification is contained within.

$$11 - 12^2 + 5 \div 16 * 2 \div 3$$

A. $[155.1, 155.41]$

B. $[-132.91, -132.73]$

C. $[-133.09, -132.89]$

D. $[154.88, 155.12]$

E. None of the above

---

6. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(2 - 10i)(5 + 8i)$$

A. $a \in [-70, -65]$ and $b \in [61, 72]$

B. $a \in [87, 93]$ and $b \in [30, 38]$

C. $a \in [87, 93]$ and $b \in [-37, -31]$

D. $a \in [-70, -65]$ and $b \in [-69, -63]$

E. $a \in [7, 14]$ and $b \in [-82, -77]$

---

7. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$(-8 + 4i)(5 + 7i)$$

A. $a \in [-69, -62]$ and $b \in [33, 39]$

B. $a \in [-16, -4]$ and $b \in [-77, -75]$

C. $a \in [-41, -38]$ and $b \in [25, 29]$

D. $a \in [-16, -4]$ and $b \in [74, 83]$

E. $a \in [-69, -62]$ and $b \in [-38, -35]$

---

8. Choose the **smallest** set of Real numbers that the number below belongs to.

$$\sqrt{\frac{140625}{625}}$$

A. Integer

B. Not a Real number

C. Rational

D. Whole

E. Irrational

---

9. Choose the **smallest** set of Complex numbers that the number below belongs to.

$$\frac{4}{2} + 64i^2$$

A. Nonreal Complex

B. Irrational

C. Pure Imaginary

D. Not a Complex Number

E. Rational

---

10. Simplify the expression below into the form $a + bi$. Then, choose the intervals that a and b belong to.

$$\frac{72 + 44i}{5 + 2i}$$

A. $a \in [14.5, 16]$ and $b \in [75, 77]$

B. $a \in [8, 10]$ and $b \in [12, 14]$

C. $a \in [14, 15]$ and $b \in [20.5, 22.5]$

D. $a \in [14.5, 16]$ and $b \in [1.5, 3]$

E. $a \in [447.5, 449]$ and $b \in [1.5, 3]$
